

WHAT IS CLAIMED IS:

1. A compact air conditioner for automobiles, comprising:

5 an evaporator positioned on an upstream side of an interior flow passage of an air conditioner;

a heater core positioned on a downstream side of said interior flow passage;

10 a defrost vent selectively opened and closed by a defrost door, and positioned in a mixing chamber that is situated in an exit of said interior flow passage;

a face vent opened and closed by a face door;

15 a floor vent divided by a second partition positioned behind said heater core, and selectively opened and closed by a floor door;

20 a first partition positioned between said evaporator and said heater core, and provided with a first blowing opening for allowing air to detour said heater core and a second blowing opening for blowing air to said heater core;

25 a temperature regulating door for regulating the degree of opening of said blowing openings, said temperature regulating door being supported on both sidewalls of said air conditioner housing by its two side support arms;

30 a heater chamber containing said heater core, said heater chamber being defined by said first and second partitions and a pair of side partitions, being open at its bottom and communicating with said second blowing opening; and

a pair of side blowing passages formed between each side partition and an interior wall of said air conditioner housing.

2. The compact air conditioner according to claim 1,  
further comprising a heater core inserting hole, said  
heater core inserting hole being formed on a front wall of  
5 said air conditioner housing at a position under said  
evaporator so as to allow said heater core to be removably  
inserted into said heater chamber.

3. The compact air conditioner according to claim 2,  
10 wherein said refrigerant supply and return conduits are  
connected to said heater core through said heater core  
inserting hole.

4. The compact air conditioner according to claim 3,  
15 wherein said heater core is horizontally inserted into  
said heater chamber.

5. The compact air conditioner according to claim 2,  
wherein said heater core is horizontally inserted into  
20 said heater chamber.

6. The compact air conditioner according to claim 1,  
wherein said first partition is formed to be arcuate, a  
door plate of said temperature regulating door is formed  
25 to be arcuate correspondingly to said first partition, and  
a degree of opening of said first and second blowing  
openings are selectively regulated according to an angle  
of rotation of said door plate that is rotated around said  
support arms.

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7. An air conditioner, comprising:  
a housing defining first, second and third chambers;  
a first heat exchanger located in the first chamber,

wherein the first chamber is configured to pass a first air flow through the first heat exchanger in a first direction;

5 a second heat exchanger located in the second chamber, wherein the second chamber is configured to pass a second air flow through the second heat exchanger in a second direction substantially perpendicular to the first direction;

10 the third chamber configured to receive the heat exchanged air from the at least one of the first and second heat chambers and to discharge the air therefrom; and

15 a partition member defining first and second openings, wherein the partition member is configured to partition the first, second and third chambers, the first opening is configured to allow fluid communication between the first chamber and the third chamber, and wherein the second opening configured to allow fluid communication between the first chamber and the second chamber.

20 8. The air conditioner of Claim 7, wherein the partition member has an arcuately curved surface.

25 9. The air conditioner of Claim 7, further comprising a door configured to adjust the degree of opening of the first and second openings.

10. The air conditioner of Claim 9, wherein the door has an arcuately curved surface corresponding to the curved surface of the partition member.

30 11. The air conditioner of Claim 7, further comprising a pair of passages configured to allow fluid

communication between the second chamber and the third chamber.

12. The air conditioner of Claim 7, wherein the  
5 second chamber defines a hole adapted to connect to the second heat exchanger from an outside the air conditioner.

13. The air conditioner of Claim 12, further  
comprising a conduit connected to the second heat exchanger  
10 through the hole.

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